

CLAIMS

What is claimed:

1. A system for delivering power to a therapeutic device, comprising:

5 a generator including a power regulation circuit for producing an output power at a generator output;

a patient cable having a proximal end configured for coupling to the generator output, and a distal end configured for coupling to the therapeutic device; and

10 a feedback apparatus coupled to one or both of the patient cable and the therapeutic device, the feedback apparatus configured to sense at least one variable that depends on a delivered power and to generate a feedback signal depending on the delivered power, the power regulation circuit controlling the output power based at least in part on the feedback signal.

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2. The system for delivering power in claim 1, wherein the feedback apparatus measures the at least one sensed variable.

3. The system for delivering power in claim 2, wherein the feedback signal is
20 based on the measured variable.

4. The system for delivering power in claim 1, wherein the feedback apparatus comprises a voltage sensor.

5. The system for delivering power in claim 1, wherein the feedback apparatus comprises a current sensor.

6. The system for delivering power in claim 1, wherein the feedback apparatus comprises a power sensor.

10 7. The system for delivering power in claim 1, further comprising the therapeutic device, wherein the therapeutic device is an ablation catheter.

8. The system for delivering power in claim 7, wherein the therapeutic device delivers radio frequency (RF) energy.

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9. The system for delivering power in claim 7, wherein the therapeutic device delivers microwave energy.

10. The system for delivering power in claim 7, wherein the therapeutic device
20 delivers ultrasound energy.

11. The system for delivering power in claim 1, further comprising a feedback path coupled to the feedback apparatus for transmitting the feedback signal.

12. The system for delivering power in claim 11, wherein the feedback path
5 comprises of at least one wire connected to the power generator.

13. The system for delivering power in claim 12, wherein the feedback path comprises of a wireless transmitter.

10 14. The system for delivering power in claim 1, wherein the feedback signal is analog.

15. The system for delivering power in claim 1, wherein the feedback signal is digital.

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16. A method for delivering power to a therapeutic device, comprising steps of:

generating an output power;

delivering the output power over a patient cable to the therapeutic device;

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sensing at least one variable that depends on the delivered power;

generating a feedback signal that depends on the sensed variable; and

modifying the generated output power based at least in part on the feedback signal.

17. The method for delivering power in claim 16, further comprising step of
5 measuring the sensed at least one variable.

18. The method for delivering power in claim 17, wherein the feedback signal is based on the measured at least one variable.

10 19. The method for delivering power in claim 16, wherein the sensing step comprises sensing a current and a voltage near the distal end of the patient cable.

20. The method for delivering power in claim 16, wherein the sensing step
15 comprises sensing the delivered power near the distal end of the patient cable.

21. The method for delivering power in claim 16, wherein the therapeutic device delivers radio frequency (RF) energy.

20 22. The method for delivering power in claim 16, wherein the therapeutic device delivers microwave energy.

23. The method for delivering power in claim 16, wherein the therapeutic device delivers ultrasound energy.

24. The method for delivering power in claim 16, the method further
5 comprising step of transmitting the feedback signal.

25. The method for delivering power in claim 24, wherein the transmitting step uses at least one wire to transmit the feedback signal.

10 26. The method for delivering power in claim 24, wherein the transmitting step uses a wireless transmitter to transmit the feedback signal.

27. The method for delivering power in claim 16, wherein the feedback signal is analog.

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28. The method for delivering power in claim 16, wherein the feedback signal is digital.